SEMESTER END EXAMINATION, DECEMBER 2025

Course Name: - B. Tech(CSE) **Semester: - 3rd**

Paper Name: - Advance Web Technology **Paper Code: -NCS 302**

Time - 3 Hrs + 20 minutes per hour extra time for V.I. & examinees with writer.Max Marks-70

समय 3 घण्टे, 20 मिनट प्रति घंटे अतिरिक्त–दृष्टिबाधित एवं सह लेखक परीक्षार्थियों के लिए। अधिकतम अंक–70

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries **3 marks**. **All questions are compulsory**.
- Section B- Answer any **5 out of 7** given questions. Each question carries **7 marks**.
- Section C- Answer any **2 out of 3** given questions. Each question carries **10 marks**.

Section – A खण्ड–अ

Objective Questions(वस्तुनिष्ठ प्रश्न)

1. Answer all the following questions. 5x3 =15

निम्नलिखित सभी प्रश्न अनिवार्य हैं।

i) In PHP-based web applications, session handling is required mainly because:

A. PHP variables are not persistent
B. Databases cannot store user data
C. HTTP does not maintain user state across requests
D. Cookies are insecure by default

ii) Which scenario will NOT trigger an onunload event reliably?

A. Closing the browser tab
B. Reloading the page
C. Navigating to another site
D. Browser crash or forced termination

iii) Which AJAX problem is MOST difficult to debug in real-time applications?

A. Syntax errors in JavaScript
B. Network latency and race conditions
C. Missing HTML elements
D. Invalid XML comments

iv) The primary role of Apache in a PHP–MySQL environment is to:

A. Execute SQL queries
B. Interpret PHP scripts
C. Act as a web server handling HTTP requests
D. Manage database users

v) The primary reason jQuery is preferred over JavaScript is:

A. It replaces HTML
B. It reduces browser compatibility issues
C. It eliminates the need for CSS
D. It runs only on servers

Section – B खण्ड–ब
Short Answer Questions (लघुउत्तरीय प्रश्न)

2. Answer any five of the following questions. 5x7=35
निम्नलिखित में से किन्हीं पाँच प्रश्नों के उत्तर दें।

i) What is JQuery Library? Explain the core features of JQuery Library?

ii) Explain session handling in JSP with an example? How does it differ from session management in PHP?

iii) Explain the role of chmod and chown in Linux file permission and ownership management.

iv) Explain the steps involved in starting and testing the Apache web server.
How can common installation issues be identified during testing?

v) Explain 'this' keyword in JavaScript with respect to event handling. Write a simple syntax to demonstrate its usage.

vi) Explain the structure of XML documents. Discuss XML declaration, root element, child elements, attributes, and entity references.

vii) Differentiate between static and dynamic web pages? Explain how PHP enables server-side processing to convert static pages into dynamic web applications.?

Section – C (खण्ड–स)
Descriptive Questions (विवरणात्मक प्रश्न)

3. Answer any two of the following question. 2x10=20
निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर दें।

i) Define Surface Web, Deep Web, and Dark Web? Explain the security challenges of Dark Web. Suggest possible preventive measures to avoid misuse of such networks?

ii) Explain AJAX using the Fetch API and Promise objects in JavaScript? Briefly describe how the Fetch API works and write the general syntax used to handle asynchronous requests and responses using Promises.?

iii) **Scenario:**
An online examination system must restrict users from reloading the page, accidentally exiting the browser, and submitting incomplete or invalid forms during an examination.
Question:
Explain how JavaScript events and event handlers can be used to monitor and control user actions in such a system. Discuss the role of onload and on-unload events in managing the page lifecycle, and explain how the 'this' keyword helps in handling user interactions effectively to improve system reliability?

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